



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/034,305      | 12/28/2001  | Marcia Reid Martin   | 2001-054-SFT        | 8942             |

7590 01/02/2004

## STORAGE TECHNOLOGY CORPORATION

One Storage Tek Drive  
Louisville, CO 80028-4309

| EXAMINER |
|----------|
|----------|

THAI, TUAN V

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2186

DATE MAILED: 01/02/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/034,305

Applicant(s)

MARTIN, MARCIA REID

Examiner

Tuan V. Thai

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/02/03.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 AND 5.                      6) ☐ Other: \_\_\_\_\_

**Part III DETAILED ACTION**

***Specification***

1. Claims 1-22 are presented for examination.
2. Applicant is reminded of the duty to fully disclose information under 37 CFR 1.56.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-22 are rejected under 35 U.S.C. § 102(b) as being anticipated by Squibb (USPN: 6,158,019);

As per claim 1; Squibb discloses the invention as claimed including a data management appliance comprising a random-access-memory (e.g. see column 3, lines 44 et seq.); control circuit for receiving commands from a host is taught to the extent that it is being claimed since both read and write are received and controlled from host computer 3 (e.g. see figure 1A); in response

to the control circuit receiving a write command from the computer, the control circuit updates the random-access storage unit to include information associated with the write command (e.g. see column 2, lines 10 et seq.); and in response to a read command including a logical address and a time value, the control circuit retrieves data representing contents of the logical address at a time represented by time value (e.g. see figure 4A; column 10, line 65 bridging column 11, line 1);

As per claim 2, the further limitation of the write commands are replicated from write commands issued to a primary storage device is embedded in the system of Squibb and taught to the extent that it is being claimed, for example, the current invention does contemplate operating in the absence of the primary storage device for the file to be restored (e.g. see column 4, lines 14 et seq.);

As per claim 3, the further limitation of the write commands are received from the computer system through a replicating controller is taught by Squibb since his system is operated in network or client/server environment where replicated controller being utilized (e.g. see column 4, lines 56-57);

As per claim 4, Squibb discloses the write command replicated by the computer system (e.g. see figure 1, column 2, lines 10 et seq.);

As per claim 5, Squibb discloses the random-access storage unit stores a forward journal (e.g. see column 2, lines 28 et

seq.);

As per claim 6, wherein the random-access storage unit stores a mirror-in-the-middle containing a copy of contents of a primary storage device at a fixed point in time (e.g. see column 2, lines 48 et seq.);

As per claim 7, the further limitation of wherein the random-access storage unit stores at least one snapshot containing changes that when made to contents of the mirror-in-the middle would result in a previous version of the contents of the primary storage device as being equivalent to the utilization of event journals to chronologically re-enact the storage file given an original file (e.g. see column 2, lines 28 et seq.);

As per claim 8, the concept of a mapping object stored in the control circuit for mapping logical addresses into physical addresses on the mirror-in-the-middle and contained in the at least one snapshot is equivalently taught as the creation and utilization of an event map (e.g. see column 5, lines 24 et seq.; column 7, lines 43 et seq., also see figure 2A);

As per claim 9, the further limitation of the control circuit receives commands from the computer system through a storage network is taught by Squibb since his data processing system is operating thru a client/server environment (e.g. see column 3, lines 30 et seq.; column 4, lines 55-57);

As per claims 10 and 11, Squibb discloses the random-access storage unit include a disk memory (e.g. see column 2, lines 4-

9);

As per claims 12-22, they encompass the same scope of invention as to that of claims 1-11, the claims are therefore rejected for the same reasons as being set forth above. In addition, it should be noted that the mount command including a time value, the control circuit configures to perform future read operations with respect to a fixed time represented by the time value is being equivalent to the fulfilling a read request for an updated storage from the combination of fig. 4A having an original storage 6, an event journal 21 and an event map 29 (e.g. see figure 4B, column 11, lines 1 et seq.).

#### **Conclusion**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan V. Thai whose telephone number is 703-305-3842.

The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays or e-mailed at ***tuan.thai@uspto.gov***;

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Matthew M. Kim can be reached on (703) 305-3821. The fax phone number for the

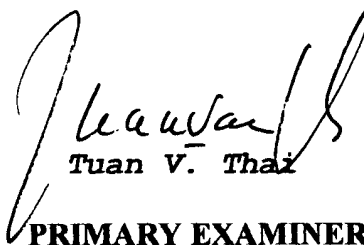
Serial Number: 10/034,305  
Art Unit: 2186

-6-

organization where this application or proceeding is assigned is  
(703) 872-9306.

Any inquiry of a general nature or relating to the status of  
this application or proceeding should be directed to the Group  
receptionist whose telephone number is (703) 305-3900.

**TVT**/December 27, 2003

  
Tuan V. Thai  
**PRIMARY EXAMINER**

**Group 2100**